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A qualitative study followed slow-progress students as they engaged in embedded word studies in their classroom-based literacy activities. Issues addressed were: (1) the ways embedded word studies promoted slower-progress students' word knowledge; (2) how developing word knowledge influenced these students' reading and writing attempts; and (3) effects of the social context on beginning readers' strategies and motivation to gain word knowledge. Participants included a Caucasian male, an African-American male, an African-American female, and their teacher in an eastern United States public school. Open and axial coding was performed on field notes (including interviews), running records, and students' writing samples to find recurring patterns. Instruction successfully promoted the case-study students' individual progress. Social context was a means to enhance students' involvement that increased strategy use. Findings support the view that word studies can be embedded within a holistic literacy setting in ways that result in gains in spelling and decoding competence. (Contains 40 references and 9 figures of data.) (Author/RS)

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The Influence of Embedded Word-Study Instruction, Social Context, and Motivation of Children's Independent Reading and Writing: A Case Study of 3 First-Graders

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READING RESEARCH REPORT NO. 65
Summer 1996

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The National Reading Research Center (NRRC) is funded by the Office of Educational Research and Improvement of the U.S. Department of Education to conduct research on reading and reading instruction. The NRRC is operated by a consortium of the University of Georgia and the University of Maryland College Park in collaboration with researchers at several institutions nationwide.

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Abstract. *This study followed slow-progress students as they engaged in embedded word studies in their classroom-based literacy activities. The questions asked were: (a) In what ways do embedded word studies promote slower-progress students' word knowledge?; (b) How is developing word knowledge influencing these students' reading and writing attempts?; and (c) What effect does the social context have on beginning readers' strategies and motivation to gain word knowledge? Participants included a Caucasian male, an African-American male and female, and their teacher in an eastern United States public school. A qualitative approach (Strauss & Corbin, 1990) was employed in this study. Open and axial coding was performed on field notes (including interviews), running records, and students' writing samples to find recurring patterns. Instruction successfully promoted the case-study students' individual progress. Social context was a means to enhance students' involvement that increased strategy use. Instructional implications are discussed.*

Most educators agree that a deep and thorough knowledge of English orthography enables fluent word decoding during reading and accurate spelling during writing. Word recognition is the strongest predictor of higher level reading comprehension (Perfetti, 1985) and fluent word recognition is dependent on knowledge of orthographic patterns (Bear, Invernizzi, Templeton, & Johnston, 1996; Juel, Griffith, & Gough, 1986; Liberman, Shankweiler, Fischer, & Carter, 1974; Mann, 1984). However, literacy professionals cannot reach consensus on the best methods for promoting word knowledge. Some argue for a formal spelling program to run parallel with reading and writing instruction (e.g., Henderson, 1990). Others argue that phonics instruction should anchor early reading instruction (e.g., Adams, 1990). Some make the case that word-level instruction can coexist in holistic language arts instruction (e.g, Freppon & Dahl, 1991;

O'Flahavan & Blassberg, 1992; Sawyer, 1988; Wilde, 1992).

This renewal of the Great Debate in early literacy education (Chall, 1967) coincides with a new perspective on the role of word knowledge in literacy. In the past, literacy educators assumed that word recognition and word production were two distinct skills (e.g., Frith, 1980), because the errors that children made while reading and spelling were distinct, leading to the conclusion that there were two possible cognitive sources for recognition and production. However, recent evidence suggests that children draw from a centralized source of word knowledge, and that differences in recognition and production errors may be due to the different cognitive demands involved while reading and writing. In general, researchers now contend that word production (or spelling) is a far more sophisticated task than word recognition (e.g., Bear et al., 1996; Gill, 1992).

Consequently, there is a flurry of classroom-based research focused on reversing the tradition of insulating word study from real reading and writing contexts and embedding the study of words in the natural language and literacy practices of the classroom (e.g., Cunningham, 1995; Mills, O'Keefe, & Stephens, 1992; O'Flahavan & Blassberg, 1992; Uhry & Shepherd, 1993; Wilde, 1992). While some approaches are more embedded than others, many of these approaches sample words from actual reading and writing experiences, use learning activities that involve students in constructing their understandings of how spelling works (e.g., generating and sorting word families; hunting for words), depend on a print rich environment (e.g., word wall), and assess students' word knowledge continuously (e.g., looking at students' invented spellings).

Although strategy development and thorough word knowledge are cognitive processes, they are also influenced by social and motivational factors. Some people believe a collaborative context supports strategy learning and development. For example, Paris and colleagues argue that constructing meaning promotes motivation by assisting children in making sense of their learning the task in which they engage and the strategies they employ (Paris & Byrnes, and colleagues; Turner & Paris, 1995). Not only do interactive literacy activities teach children the societal function and conventions of reading, these activities also link reading with fun and satisfaction, which increases children's desires to involve themselves in literacy tasks (Morrow, 1993; Teale, 1982).

Social contexts also support motivation for literacy activities. Guthrie, McGough, Bennett, & Rice (1996) define motivations for reading as internalized reasons for reading that activate thinking that enables students to perform a variety of tasks and participate in social contexts. Social interaction is motivating in many ways. Peer comments and suggestions can spark students' interests. Students' confidence and self-efficacy may increase by watching their peers (Schunk, 1989). Cooperative learning research has shown that working with others promotes student engagement in work and group awareness (Slavin, 1987). Collaboration can increase both effort and persistence. More challenging tasks are more intrinsically motivating for students (Hooper, 1994). Situa-

tions that encourage productive social interaction yield choices for students to become more confident and competent readers and writers (Turner & Paris, 1995).

Social contexts are a means to support literacy activities. Social impact and rewards create the push or the motivation for students to spend the time that is necessary for them to learn to read and write. The more feedback and encouragement they receive from peers and teachers, the more persistently children continue to imitate the literate behaviors of their role models (Bear et al., 1996). Social interaction is motivating in many ways. Peer comments and suggestions can spark students' interests. Students' confidence and self-efficacy may increase by interacting with their peers (Schunk, 1989). Situations that encourage productive social interaction yield choices for students to become more confident and competent readers and writers (Turner & Paris, 1995). Students' involvement in learning includes both cognition and motivation, operating together, not separate from one another (Pintrich & Schrauben, 1992).

We need to learn more about how students marshall their developing word knowledge as they read and write independently in an embedded word-study environment. The purpose of the study was to examine the intersection of social context, strategy use, and motivation in early literacy to better understand the effect these factors have on slower-progress readers and writers. This study followed three slow-progress first-graders as they engaged in embedded word studies in the context of their classroom-based reading and writing activities over a period of 4 months. The questions guiding the investigation were: (a) In what ways do embedded word studies promote slower-progress students' word knowledge?; (b) How is developing word knowledge influencing these students' word recognition and word production attempts?; and (c) What effect does the social context have on beginning readers' strategies and motivation to gain word knowledge?

Method

This research was conducted in the context of a larger collaborative research and development project between Arlington Public Schools, Virginia, and the National Reading Research Center, University of Maryland. The mission of the continuing project is to decrease the dependence on reduced-ratio literacy interventions (e.g., Reading Recovery®; Chapter I services) by transforming regular classroom instruction. A qualitative approach (Strauss & Corbin, 1990) was employed in this study to document how 3 case-study students acquired word knowledge and applied this knowledge to independent reading and writing activities.

Participants

The teacher. Maria is an intelligent, energetic teacher who has taught kindergarten and first grade for 7 years. Maria's first-grade class was an ethnically, linguistically, and economically diverse group of students. She added to this diversity with her Filipino heritage. Informal interviews revealed that Maria believes the classroom should be a community in which students have access to as many resources as possible to help them learn. When asked how she accomplished this goal, she explained that

she taught her students to have tolerance and respect for each other as people by allowing each student to share his/her native culture and heritage with the class. Maria said, "Once the students felt like they were all on equal ground, they could trust and help each other to learn." Maria said she also encouraged them to share ideas and ask advice from their peers; she taught them how to be resources, and how to get help from others, not just from her. Her main goal at the beginning of the year was to create a classroom environment where it was okay to take risks and make mistakes; she explained this to her students and told them "that's how we learn."

The case-study students. Before the study began, 3 students were chosen to participate in the study: a Caucasian male, Peter; an African-American male, Ben; and an African-Amerian female, Tania.[1] The students were chosen based on: (a) progress along a scale of spelling knowledge as determined by a Developmental Spelling Analysis (Ganske, 1993); (b) level of reading progress as determined by teacher ranking and from the teacher's continuous running record assessment; and (c) exclusion from supplemental services, such as Reading Recovery® or ESOL.

Maria took running records of her students on a regular basis. They were usually taken during the free-choice time, after she finished her guided reading groups. Her running records were always taken on the second exposure to a text. The bulk of her reading materials had been leveled following the procedures set forth by Peterson (1991). Each month, she recorded the highest, latest reading-level of each student in her room.

Current research on word knowledge suggests that a child's developing word production, or invented spelling, lags behind other forms of word knowledge, such as vocabulary and word recognition (e.g., Bear et al., 1996; Gill, 1992). For example, Bear et al. (1996) contend that certain kinds of spelling errors at specific stages of orthographic knowledge reflect a progressive discrimination of word elements, which then determines how words are read and written. Consequently, in this study, we elected to assess student's spelling development as an indicator of students' word knowledge.

Henderson (1990) formulated six stages of spelling development. These stages are descriptive of students' spelling behavior and the basic spelling strategies they use in each stage. They are: *preliterate* (e.g., alphabet-like and text-like attempts at script), *early letter name* (e.g., syllabic writing—P for STOP), *middle and late letter name* (e.g., reliance on letter names to represent phonemes—PET for PETE), *within-word patterns* (e.g., errors related to lower vowel variants—BATE for BAKE), *syllable juncture* (e.g., errors at syllable boundaries —BAKEING for BAKING), *and derivational constancy* (e.g., errors related to derivations—COMPUTISHUN for COMPETITION). See Bear et al. (1996) for more a detailed description of these stages.

Ganske (1993) developed and validated a qualitative inventory useful in determining a student's progress along these six stages. This inventory was administered to all of Maria's students in October 1994 and again in June

[1]Pseudonyms that preserve ethnic heritage and gender are used for the case-study students.

1995. The words were then scored according to the Bear et al. (1996) scale (see Figure 1), which illustrates the pre-post view of the case-study students' spelling development over time.

Examination of these data, combined with teacher ranking and a list of students who received supplemental services, resulted in the selection of the case-study students ($n=3$). In October 1994, these 3 students were the slowest-progress readers and spellers in a class of 18 students, and did not receive supplemental services. Seven other students ($n=7$), who also did not receive supplemental services exhibited higher independent reading levels and more advanced progress in spelling. Four students ($n=2$) who received second-language services in English (ESOL) read and spelled at slightly higher levels. Two students ($n=2$) who received special education support and two students ($n=2$) who received Reading Recovery® instruction read at a much lower independent level; however, these students' spelling progress was equivalent to the case-study students.

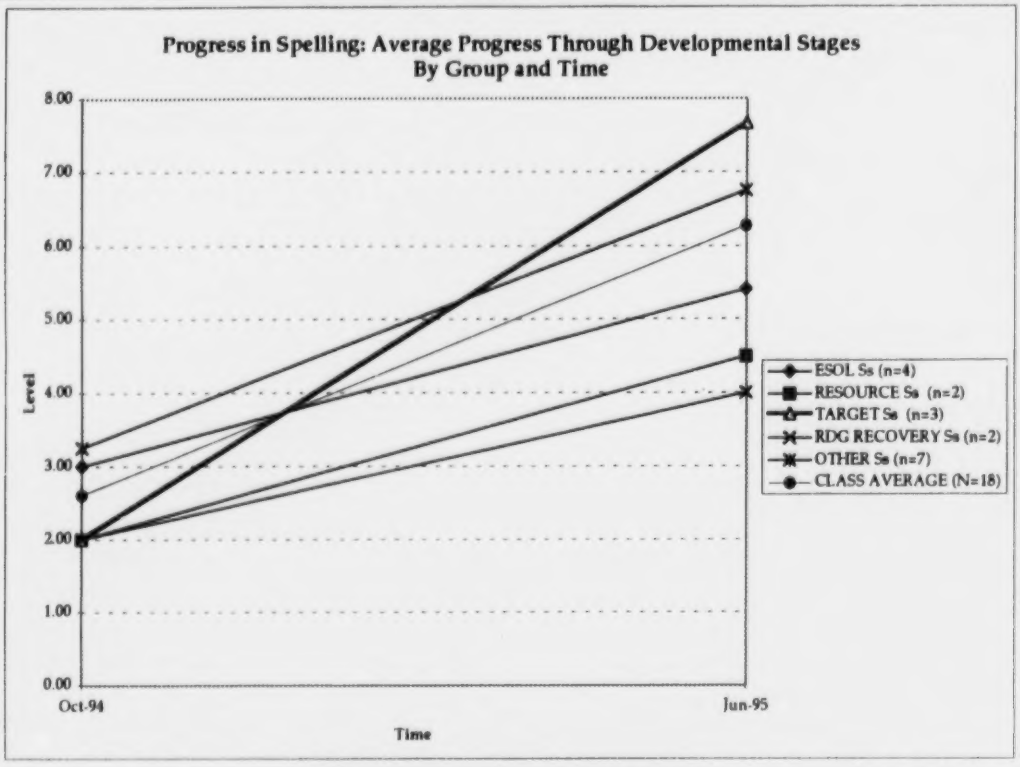
The Classroom Context

Maria employed a variety of materials in her literacy program including the following: environmental print, such as posters, pictures, books, and visual aids. All of these were abundant in number and accessible to the students. Everything in her room was a resource for the students. Maria kept a teaching log from which her daily instructional decisions were make, based on her observations of the students' reading and writing attempts. She responded to students' developmental needs by introducing appropriate word patterns in her instruction. For example, a word wall covered the entire south wall of the room (approximately 20' x 8'). Words were assembled in alphabetical order and there were dozens of manipulative word cards on the wall, and on charts, that depicted various word patterns (e.g., five ways to spell the "long e" sound). The word was used to accomplish different goals, namely to develop and gain familiarity with key word patterns. It was used as an archive for students' reading and writing activities (Wagstaff, 1994). Maria encouraged the students throughout the day to use these environmental resources as they read and wrote independently.

Other resources that were available included a listening center complete with headphones, tape recorders and books; and an inviting reading corner stocked full of books of many kinds, and on many different reading levels, and with soft cushions for sitting and reading. At times, there were colorful student pictures from art class on the wall, plants and seeds growing in the window sill, and a pet snake in a cage. These items displayed in the classroom were used as props and tools for students to generate writing and other word-study activities. The pet snake, for example, served as a catalyst for live observation and independent writing (see Figure 2).

Embedded Word Study

Maria strived to embed word-study activities within the natural language and literature of her classroom. These activities were taught in small-group or whole-class contexts, depending on the developmental needs of the students.



15-Point Spelling-By-Stage Assessment	
Late Derivational Constancy	15
Middle Derivational Constancy	14
Beginning Derivational Constancy	13
Late Syllable Juncture	12
Middle Syllable Juncture	11
Early Syllable Juncture	10
Late Within-Word Pattern	9
Middle Within-Word Pattern	8
Beginning Within-Word Pattern	7
Late Letter Name	6
Middle Letter Name	5
Early Letter Name	4
Early Letter Name	3
Early Letter Name	2
Preliterate	1

Figure 1. Spelling Progress: Average progress through developmental stages by group and time.

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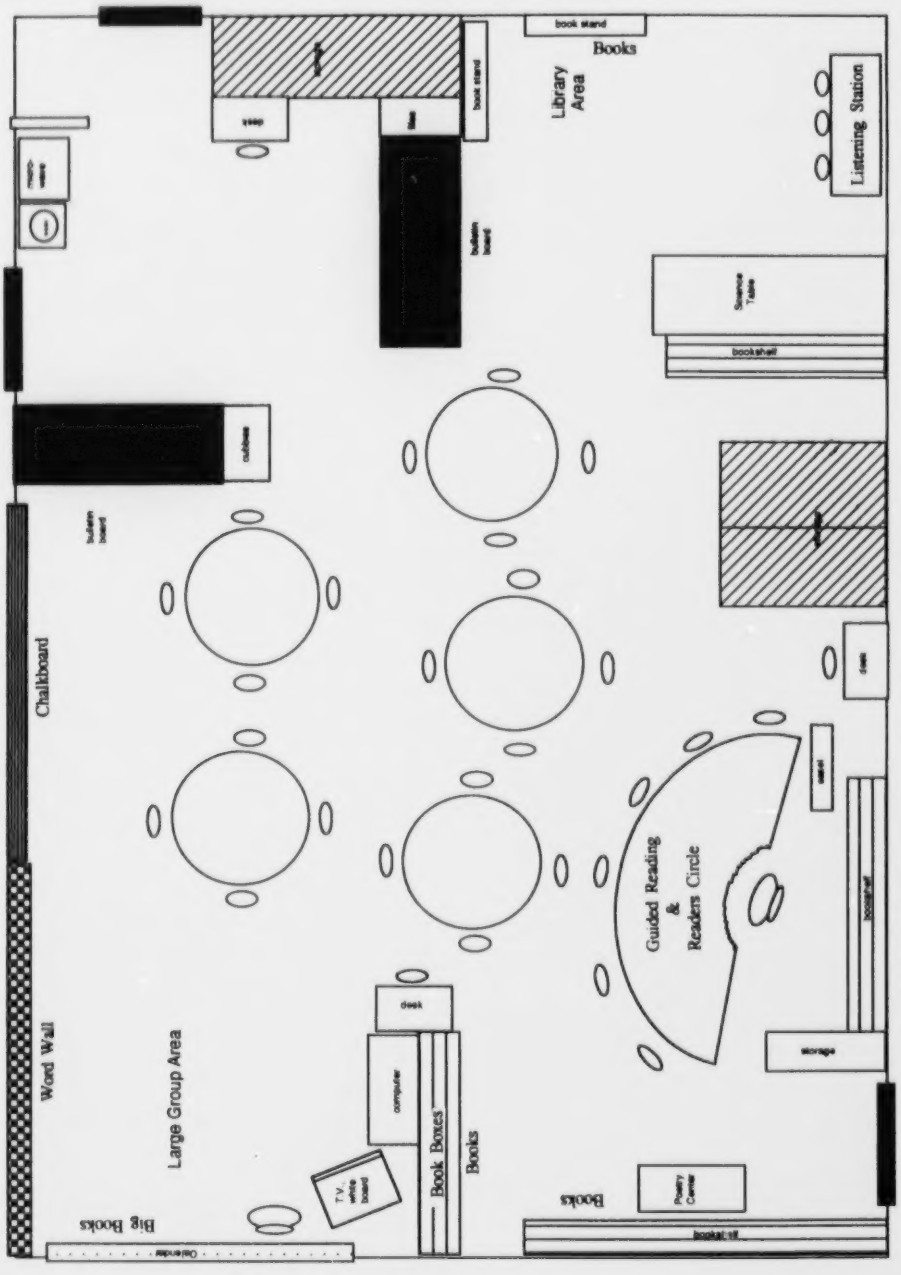

Figure 2. Floor plan of Maria's first grade classroom.

Maria assessed the needs of her students by evaluating their word recognition to individual differences (e.g., preliterate vs. within-word spellers). She would occasionally group her students for differentiated word-study activities. If she observed that students had trouble producing certain features (e.g., initial consonants, blends, vowel patterns) or certain word pattern or word chunks (e.g., ack, a_e, ay), she would introduce them in the next word-study activity.

For example, to introduce consonant blends *br*, *gr*, and *tr*, Maria used the book *The Three Billy Goat's Gruff*. In a shared reading with the class, she read the book and had the students find all the words that were spelled with these blends. The students then generated some from their own memory, and Maria wrote the words on chart paper. The students were then sent to hunt for other examples of the "r blends." Eventually, these examples were placed on manipulative word cards to be used for other related activities such as picture and word sorts where students had to distinguish the sound of the blends from one another. Eventually, the students constructed an "archive" of the features with selected examples and posted the archive in a place in the classroom that was accessible during any reading and writing activity (see Figure 3).

Daily Schedule

Typically, literacy instruction in Maria's class began at 9:10 a.m. with a shared reading of a book or a "morning message" she had written to the class on a dry-erase board. The morning message informed students of the day's activities. Maria used the opportunity to reinforce previously taught patterns or print conventions by deleting or manipulating those features in the message and asking individual students to provide the missing patterns by "sharing the pen" with her. The words focused on specific word patterns (e.g., words with the "long e" sound) and reinforced writing-process concepts (e.g., parts of a letter). Students generated words from the morning message to add to the word wall.

At 9:30 a.m., students engaged in "free flow centers." These centers gave students opportunities to engage in word study, writing, and other literacy activities at the appropriate developmental level, or reinforced a science, social studies, or health theme. Maria introduced the new activities offered for that day and explained how to do the given assignments. Each table featured a reading or writing activity that incorporated the previous day's word-study topic (e.g., picture sorts with blends *br*, *gr*, and *tr*). New activities featured a new word-study activity the class had talked about or learned in the morning message. For example, one table may have a picture- or word-sort activity. One table may have writing journals on it for children to write on their own. The students had freedom of choice with the centers, but they were required to monitor themselves to make sure they finished the work required for each table. Students were allowed to read at the reading corner (alone or with a buddy), listen to books on tape, and follow along with the book. Word-study activities came from the natural language of the classroom and through a variety of activities such as these. All activities were designed to give students success.

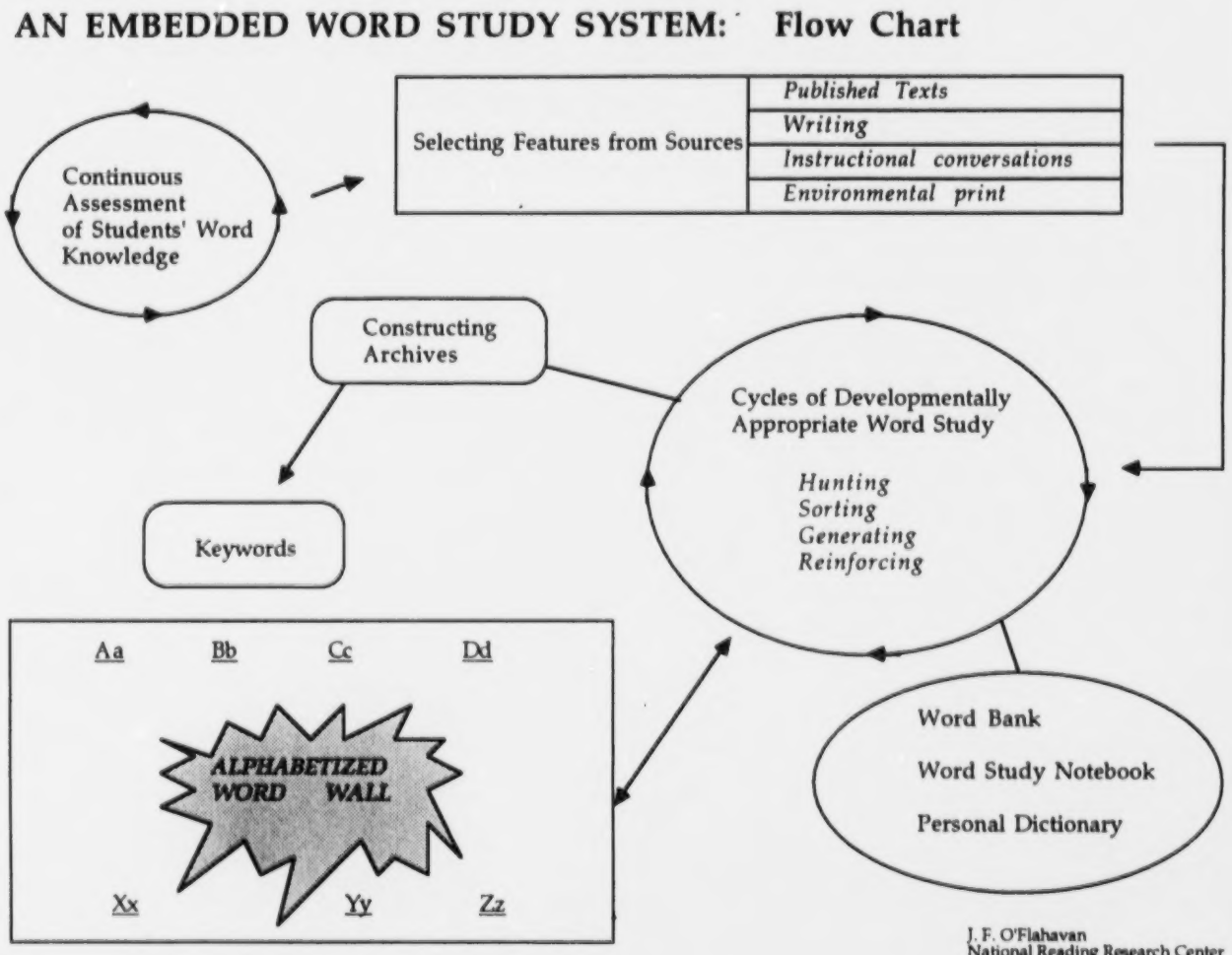

Figure 3. Embedded word study system: Flow chart.

At 9:50 a.m., with the class involved at centers, Maria worked with a guided reading group (4–6 students) in a corner of the room. Small-group instruction focused on strategies for reading within the context of authentic literature. Maria modeled and scaffolded the students' developing concepts about the forms and functions of literacy. In this context, students discussed the text and the strategies by interacting with Maria and each other. The reading group lasted for approximately 30 min.

Afternoon instruction integrated all subject areas and literacy activities into thematic units. Writer's workshop was also an afternoon activity that incorporated these themes. Often, Maria modeled how to write and edit a story with the students' input and ideas (e.g., "My Trip to Jamaica"). She modeled and scaffolded students as they practiced writing independently and editing with peers (see Figure 4).

Field Observations

The case-study students were observed weekly for a total of 4 months. They were observed in four social contexts: *guided reading group*, teacher-facilitated discussion and reading with 4 to 6 students who were reading at roughly the same reading level; *buddy or paired reading*, 2 students reading a book together during the regular reading time; *independent reading*, a student reading independently; and *independent writing*, a student writing independent of peer or teacher assistance.

Observations were conducted weekly. Each visit ranged from 2–6 hr. Each day, the focus was on 1 student. This student was observed in as many key situations as possible. For example, if Maria met with the case-study students' reading group that day, one person was chosen to be the focal point. Later that morning, observations were conducted on the same student in a buddy-reading or an independent writing situation. There were days when the same student was observed in three different contexts and other days when a student was observed in only one context.

Observations were recorded in field notes, with the emphasis on classroom setting, the specific social context, the name of the story the student was reading, dialogue of as many people in the group as possible, and running records of each student's reading. After the observation ended, photocopies were made of the actual text from the book the students read. Running records and notes about the story that were taken during the observation were transferred directly to these photocopies. Students rotated as the focal point of observations so they did not always know when they were watched.

Student Interviews

Semi-structured interviews were conducted with each student following guided reading and independent writing sessions. Interviews following these two contexts allowed for the gathering of additional information on students' motivations and perceptions of the group and individual contexts:

- How do you feel about what you just read (wrote)? Why?
- Why did you stop?
- What would have happened if you had not been reading (writing)?

Maria's Week

	8:10-8:30	8:30-9:00	9:00-9:15	9:15-10:00	10:00-10:05	10:05-10:15	10:15-10:40	10:40-11:00	11:00-11:15
M	Check In Opening Calendar Morning Message	Shared Reading Reading Mini Lesson	Book Boxes	Free Flow Centers Guided Reading Groups or Reader's Circles (2-4 groups/day) Observation and Evaluation	Clean Up	Class Sharing	Word Wall Lesson Generate spelling words	spelling tasks (coop. groups)	Read Aloud or Author's Chair
T		Shared Reading with Follow Up Activity	Book Boxes				Writer's Workshop Mini Lesson	Writer's Workshop	
W		Shared Reading Reading Mini Lesson	Book Boxes			Interactive Writing Modelled Writing (Got limited to one time a week - this is just where I could do it.)		Follow Up Writing Experience	
R		Shared Reading with Follow Up Activity	Book Boxes			Class Sharing	Writer's Workshop Mini Lesson	Writer's Workshop	
F		Shared Reading Reading Mini Lesson	Book Boxes				Spelling Review	Spelling Work/Test	

Component	Function
Shared Reading	Teach: print conventions, story structure elements, organization of info., (webs, lists, etc.), chart making, vocab. bldng, etc.
Shared Reading Follow Up	reproduction of text, innovations of text, math, science, SS connection/graph, etc.
Book Boxes	children read independently, eventually logging books read and ability to read a text (H,IR,C)
Free Flow Centers	child's choice within limits-workshop sheet (see below)
Guided Reading	teacher directed instruction-specific teaching points
Reader's Circle	allow students to help teach and coach other students to success in reading, teaching points based on needs on the spot determined by the struggle of a student
Observation/Eval	During Reader's Circle Opening between groups as a follow up to a group anecdotal notes
Word Wall Lessons & Tasks	identify spelling words & patterns for study all week cont. reinforcement or test on Friday
Writer's Workshop Mini Lesson	focused writing point, modelling, motivating use literature as an opener
Writer's Workshop	children write with use of peers, word wall, dict., etc teacher assists, and conferences

Figure 4. Maria's daily schedule.

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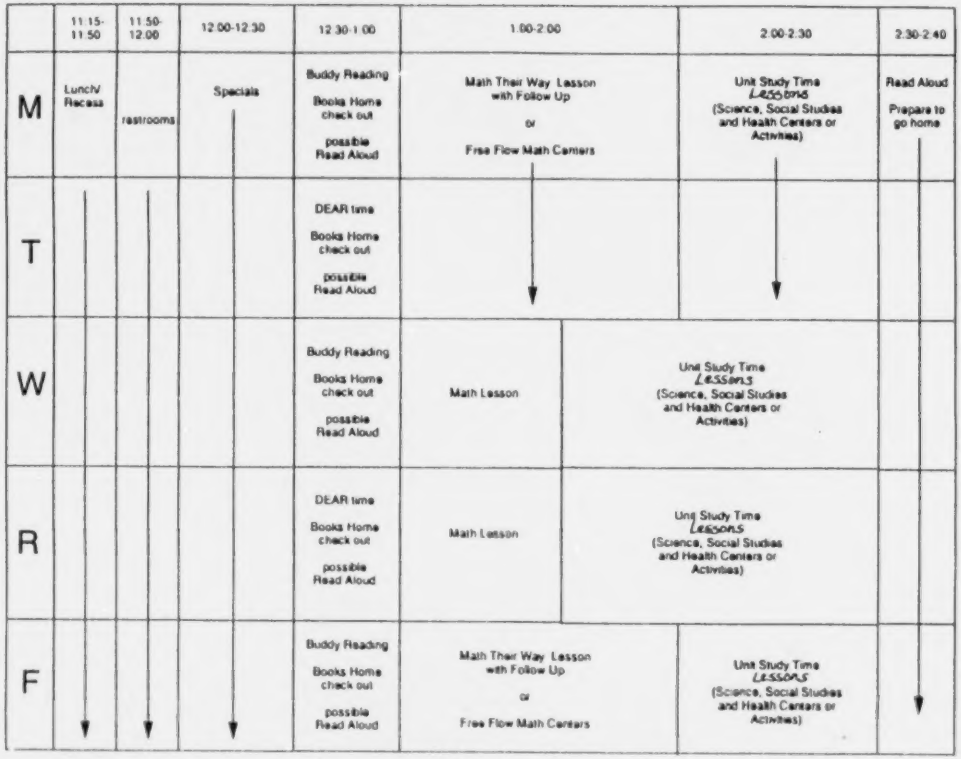


	11:15-11:50	11:50-12:00	12:00-12:30	12:30-1:00	1:00-2:00	2:00-2:30	2:30-2:40
M	Lunch/ Recess	restrooms	Specials	Buddy Reading Books Home check out possible Read Aloud	Math Their Way Lesson with Follow Up or Free Flow Math Centers	Unit Study Time Lessons (Science, Social Studies and Health Centers or Activities)	Read Aloud Prepare to go home
T				DEAR time Books Home check out possible Read Aloud			
W				Buddy Reading Books Home check out possible Read Aloud	Math Lesson	Unit Study Time Lessons (Science, Social Studies and Health Centers or Activities)	
R				DEAR time Books Home check out possible Read Aloud	Math Lesson	Unit Study Time Lessons (Science, Social Studies and Health Centers or Activities)	
F				Buddy Reading Books Home check out possible Read Aloud	Math Their Way Lesson with Follow Up or Free Flow Math Centers	Unit Study Time Lessons (Science, Social Studies and Health Centers or Activities)	

Component	Function
Buddy Reading	children buddy read, (20 min.) and share what they did with a text (5-10 min.)
Books Home check out	children chose books daily
Read Aloud	enrichment, exposure to genres, enjoyment
DEAR time	Drop Everything and Read
Math Their Way Lessons & Centers	Literature based math instruction; hands-on math centers
Unit Study Time	Integrated unit lessons and literature woven into activities and learning centers, field trips and special projects.

Centers

Big Book Center
Poetry/Chart Center
Pocket Chart Center
Writing Center
Listening Center
ABC Center
Overhead Projection Center
Unit Center (integrated work)
Library Center
Spelling Center/tasks
Follow up Table-for follow up activities from reading group
Learning Games Center

Children will eventually be able to choose the centers that they would like to do for the morning period. They will have a weekly grid that will show me the centers they worked at each day. They will be limited to two or three visits to certain centers. Some children will be assigned to certain centers (from reading group)to do follow up activities.

Figure 4. Maria's daily schedule (*continued*).

- What did you do when you came to a word you couldn't read (or couldn't spell)?
  What else?
- How did you feel while you were reading (writing)?

Extensive field notes were made during these interviews.

Students' Literacy Products

Each week, students' journal writing from the previous week was gathered and photocopied. Any additional writings students did the day they were observed, including the text of the books they were reading, were also photocopied. All of the materials were dated so the developmental progress of each student could be monitored over the course of the study.

Data Analysis

The analytic approach that was employed proceeded in five steps. First, open and axial coding was performed using the field notes (including interviews), running records, and students' writing samples and recorded onto cards to find recurring themes, concepts, categories, and properties (Strauss & Corbin, 1990). Techniques of questioning, comparing and contrasting concepts, categories, and properties found within the data records allowed data to remain open for continued inspection. Second, a chart was made which recorded the coding of these patterns focusing on (a) strategy use and word knowledge evidence, and (b) developmental cognitive processes for word recognition and word production, within the various social contexts. Third, these general strategies were analyzed further and transferred to a new database, in which the three social contexts were maintained and cross-referenced with Frith's (1985) stages of reading development. Fourth, students' spellings were analyzed and cross-referenced with Henderson's (1990) stages of spelling development, including date of entry. Last, motivation information was gleaned from the interview responses and students' other responses from other contexts, taken from the field notes. Motivations were categorized based on a coding rubric describing intrinsic and extrinsic motivations (see Table 3 in Guthrie, Ng, McCann, Van Meter, & Alao, 1995). Each motivation was given a high, moderate, or low ranking for strength, based on the number of times the motivation was expressed (e.g., 7–10 responses, 4–6 responses, 1–3 responses, respectively). With the use of these charts, analysis of patterns and themes became increasingly more apparent.

Findings

Generally speaking, Maria's approach to embedded word-study successfully promoted the case-study students' individual progress to the point at which the students' word knowledge, independent reading, and independent writing behaviors approximated progress made by students who did not receive supplemental services and exceeded progress made by students who did receive such services. All students in the class progressed, as would be expected, but the amount of progress is not the

primary focus of this investigation. We concentrate our efforts on describing the instructional methods, the social contexts, and the social and motivational dynamics of the classroom. The findings are presented below.

In What Ways Do Embedded Word-Studies Promote Slow-Progress Students' Word Knowledge?

Figure 1 depicts the case-study students' spelling development in relation to the developmental trends exhibited by the other students in Maria's class. As the chart indicates, everyone in the class made progress during the year, including the 3 case-study students. In October 1994, when Maria administered Ganske's (1993) screening inventory, the beginning developmental spelling level, on average, was between levels 2 and 3, which is the early letter name stage. The entire class began in the same developmental spelling stage, but were at different places in that stage. The case-study students were entering the letter name phase (level 2) of their development. The case-study students began on the same developmental spelling level as the 2 Resource and the 2 Reading Recovery® students. The 4 ESOL students began at a slightly higher place, at level 3, still early letter name spellers. The 7 OTHER students began slightly higher than level 3, but were not beyond the early letter name spelling stage. At the end of the year, the class average was just exiting the late letter name stage (level 6) and ready to enter the within-word pattern stage (level 7) of development. The 3 case-study students exceeded the class average and ended in the middle of the within-word pattern stage (level 8). The 7 OTHER students also exceeded the class average by finishing slightly below level 7, which is the within-word pattern stage. The 4 ESOL students finished below the class average, between the middle and late letter name stage. The 2 Resource students also finished below the class average, between the early and late letter name stage (slightly above level 4) and the 2 Reading Recovery® students finished at the early letter name stage (level 4). These comparisons simply serve as *descriptions* of the progress of the class members and serve as background information for the case study students. For this investigation, we focus on the case-study students.

The teacher's determination to embed her word studies had a direct influence on the case-study students' knowledge of instructed word features. For example, all 3 students' abilities to produce instructed features, improved consistently over time. Peter and Ben, however, increased more than Tania. By the end of the study period (June), all 3 case-studies had excelled the level of the class average. Ben and Peter both increased to a middle within-word pattern stage (level 8); Tania increased to a beginning within-word pattern stage (level 7). Again, these levels of development are descriptions of students' progress.

How did Maria's word study practices influence the case-study students' development? Several instructional themes are noteworthy. First, decisions were made about which word patterns and features to introduce based on the needs of the students. The teacher's log suggests that the teacher made her instructional decisions about what word pattern

to feature next in her instruction based on her observations of the case students' reading and writing attempts, her understanding of how word knowledge develops (e.g., Bear, et al., 1996) and her inclination to sample words for study from a variety of sources in the classroom (e.g., books, transactions, thematic studies). For example, Maria taught her letter name spellers consonant blends and digraphs in a gradual way by introducing "tr" and "th" with words that began with "t" alone. The students were able to hunt for words with these subtle changes in sound (e.g., "tr" and "th"), which extended their previous knowledge about words beginning with "t." The students sorted pictures according to the sounds they heard when they said the picture on the picture card (e.g., the number 3, a truck, a top, a thimble). Students were able to build upon their prior knowledge of "t" words by adding consonant blends and digraphs. This contributed to a highly responsive environment for developing students' knowledge of words that appears to simultaneously influence the students' word recognition and production competence (e.g., Gill, 1992). Teacher and peer support, as well as strategy instruction allow children to increase word knowledge and use this knowledge in daily assignments and activities, which allows for students' success.

Second, word-study activities showed students differences in features and patterns of words that they read and wrote on a daily basis, based on students' current level of development. There was exposure to many kinds of word patterns and features at many different developmental levels, which also promoted growth. A word-study activity built around the "th" pattern was an archive the Maria and that students made, which archived words with "th" at the beginning, in the middle, or at the end of the word (e.g., this, other, with). The students in the class thought up words that had the /th/ sound and verified where the "th" pattern came in the word. These words were written on a big chart in the shape of a tongue because Maria called these words "tongue sticker-outers," based on the formation of the tongue when saying the sound /th/. This archive was then available to the class as a resource.

Third, word studies heightened engagement for these students because the word studies were taken directly from a familiar piece of literature that the students were reading. They were engaged in word-study activities because if they knew their ABCs, they recognized familiar letters and words from the literature (e.g., the word cat from the book *Cat in the Hat* [Geisel, 1957]). The students gained success early by participating in word-study activities with word patterns in which they could build from their prior knowledge.

Last, word studies were taken from the natural language and literature in the classroom. Word-study activities were taught and reinforced within the context they were used and needed. Students saw how word study was directly applied to their reading and writing. Embedding the word study made the transition of information more natural. When students saw words in their social studies and science lessons (e.g., snake, chicken, plant), they recognized the familiar word patterns and were able to use these words in their writing, rather than the words being a stumbling block. For

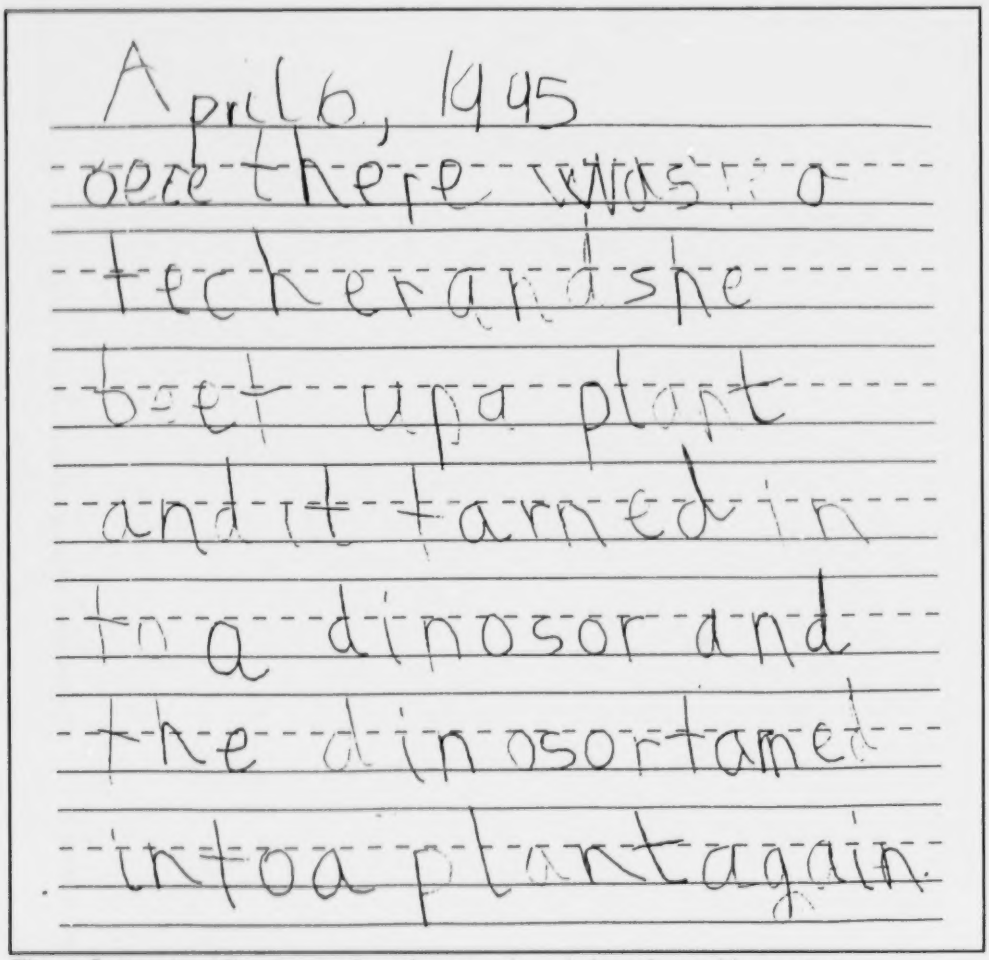
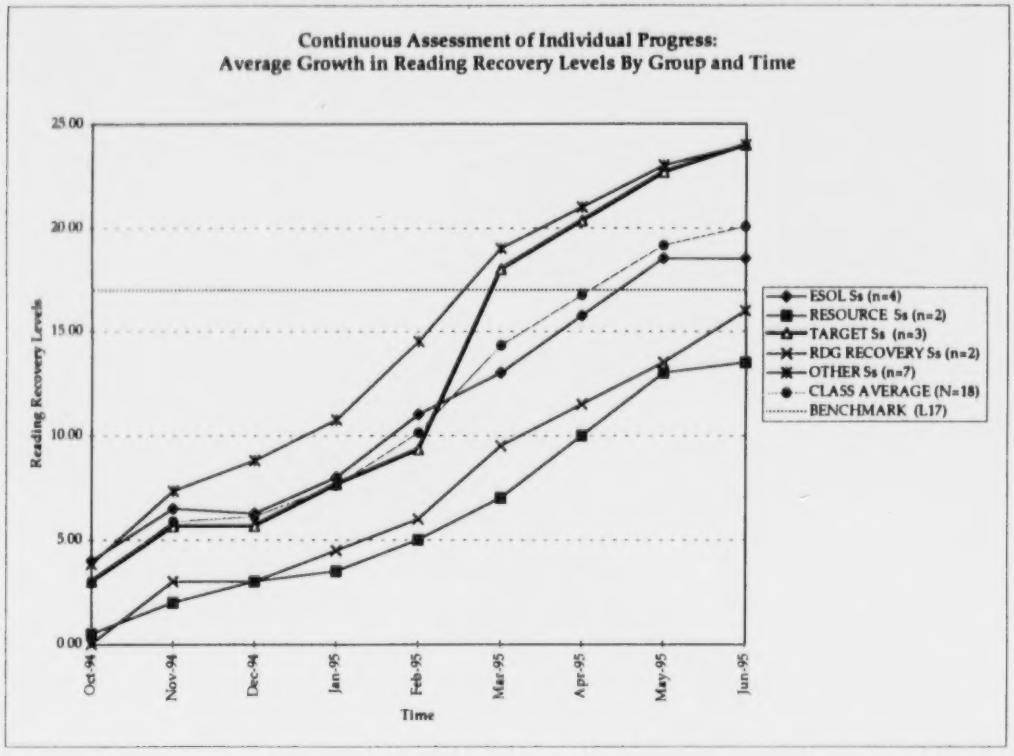


Figure 5. Sample of Peter's use of word patterns in an independent writing context.

example, Peter was writing a story about a teacher and a plant. Peter wrote, "There was a teacher and she beet up a plant . . ." He spelled "beet" by rhyming it with "sweet" and spelled plant by writing down "pl" and then "ant." Peter's knowledge of word patterns allowed him to spell plant instead of being stuck (see Figure 5).

How Is This Developing Word Knowledge Influencing These Students' Word Recognition?

Figure 6 depicts individual progress in reading over time according to the running record levels. As the chart indicates, everyone in the



KEY	
RR Level	*Basal*
B-2	Rdness
3-4	PP1
5-6	PP2
7-8	PP3
9-12	1-1
13-17	1-2
18-21	2
22-24	3
25-27	4

Figure 6. Reading Progress: Average growth in Reading Recovery levels by group and time.

class made progress during the year, including the 3 case-study students. The class average began at Reading Recovery® level 3, which is where the case-study students began. As indicated on the chart, the 4 ESOL students and the 7 OTHER students began at a slightly higher reading level (level 4). The 2 Resource and the 2 Reading Recovery® students began at the lowest reading level (level 1) compared to the rest of the class. Everyone in the class progressed substantially during the year. The Benchmark level for the end of first grade is level 17; all of the students, with the exception of the 2 Reading Recovery® and the 2 Resource students, exceeded this level. At the end of the year, the class average was at level 20; the ESOL students were on level 18; the 3 case-study students and the OTHER 7 students were at level 24. Again, these numbers are used as a way to describe the class progress and serve as background information for the case-study students.

Several instructional themes emerged during the study that help to explain all of the students' progress, including the 3 case-study students. First, the word-study activities helped these children with their word recognition because the students were repeatedly exposed to different features in words. This exposure and redundancy allowed words and their patterns to be recognized in texts read in shared reading and guided reading groups, buddy and independent reading time, and word-study activities. The reinforcement activities gave the students practice recognizing these features and word patterns. This exposure also increased these students' vocabulary. For example, in the book *The Napping House* (Wood & Wood, 1984), students were exposed to different synonyms for sleeping (e.g., napping, dozing, snoring, dreaming), which increased their vocabulary. With this book, students were also able to recognize the "ing" pattern and long-e vowel patterns (e.g., "ee" in sleep, and "ea" in dream).

Second, strategy development is important in early literacy to increase word knowledge and understanding. The ability to read words stems from a child's language acquisition. Letters, words, and sentences are three connections between text and the beginning reader's knowledge of language. At the word level, text is both recognized and produced with the use of strategies (Ehri, 1994). Strategy instruction helped these students have more control over their own learning. When students were taught to be resourceful, they were able to solve problems in reading (e.g., decoding an unknown word, monitoring comprehension). For example, in a guided reading group, Tania was reading from the book, *The Bag of Smiles* (Cowley & Webb, 1993). The other students in the group were following along as Tania read aloud. She read, "Once, there was a king who was very unhappy. He was so unhappy that he 'hurted' to see other people happy." She immediately recognized that the word "hurted" did not make sense. She said, "Hey wait, that doesn't make sense." She reread the sentence, stopping to decode the unknown word. She put her finger over the "d" and read "hate," then read "hated." She reread the sentence again, "He was so unhappy that he 'hated' to see other people happy. That makes sense," she told the group; then she continued reading.

Third, strategy instruction also extended across domains, so when students learned to be strategic with their reading, they could also be resourceful and strategic with their writing (e.g., getting out of their seat to find a word on the word wall). Tania was writing from a photograph of members of her class from their recent trip to the zoo. To spell her friends' names in her writing and illustration, she went to the word wall, found the name, brought the word card back, wrote the name, and then returned the name card back to its place on the word wall. She did this for each name (see Figure 7). Increased word knowledge allowed the students to become more aware of commonalities between words. When students came to a word they did not know but recognized the pattern, they were able to read the word by analogy (e.g., map, lap, cap), which increased their word knowledge by building on their previous knowledge of the familiar word pattern. When Peter and Tania were buddy reading *Fred is OK*, by Lynne Forman (1984), Tania got stuck on the name Hank. She said to Peter, "I'm stuck." Peter's clue was making the sound /h/. "Does it rhyme with anything?" Tania looked at the name and hesitantly said, "H-H-ank? Oh, like thank."

Fourth, social contexts were a means to support literacy activities. Social impact and rewards such as a student getting clues from peers when s/he was stuck on a word (e.g., Hank), recognition when the unknown word was figured out from the clues given (e.g., the word rhymes with thank), and having a strategy reinforced by the teacher when it was used correctly (e.g., "I like the way Ben reread the sentence when a word didn't make sense to him, and then figured out what word *did* make sense") all help create the push or the motivation for students to spend the time that is necessary for them to learn to read and write.

An example of how the social context supported these strategies was in the guided reading group. This context was a highly supportive place for students to practice their skills in word recognition with the support of a teacher and peers. One way support was evident was when a student had trouble decoding a word or making sense of a sentence. Maria taught them to say "I'm stuck" so the other students could offer clues (not answers) to the solution. For example, Ben was reading in a guided reading group from the book *The Story Game*, by Steven Kroll (1990); he got stuck on the word "stuck." He read the sentence, "So I ran to his house and there were Jimmy and Piggy [Peggy] and Lee and a big tyrannosaurus [he got this word!] struck on the stairs. Wait, *struck* on the stairs? That doesn't make sense." Peter said, "/st/ not /str/." Ben reread the sentence and replaced stuck with struck. He justified to the group that this word made sense "because you can't get *struck* on stairs but you can get *stuck* on stairs [laughter]." The justification of why a substituted word did not make sense in the sentence was a way to verify and boost Ben's word knowledge confidence.

Fourth, motivational factors also increased for the guided group context, as reported in student interviews. For example, Peter reported in an interview following a guided reading group that he likes to read in a group "because I get more clues." He went on to explain, "When I read by myself and I get stuck, I'm stuck; I have to figure it out by myself. When

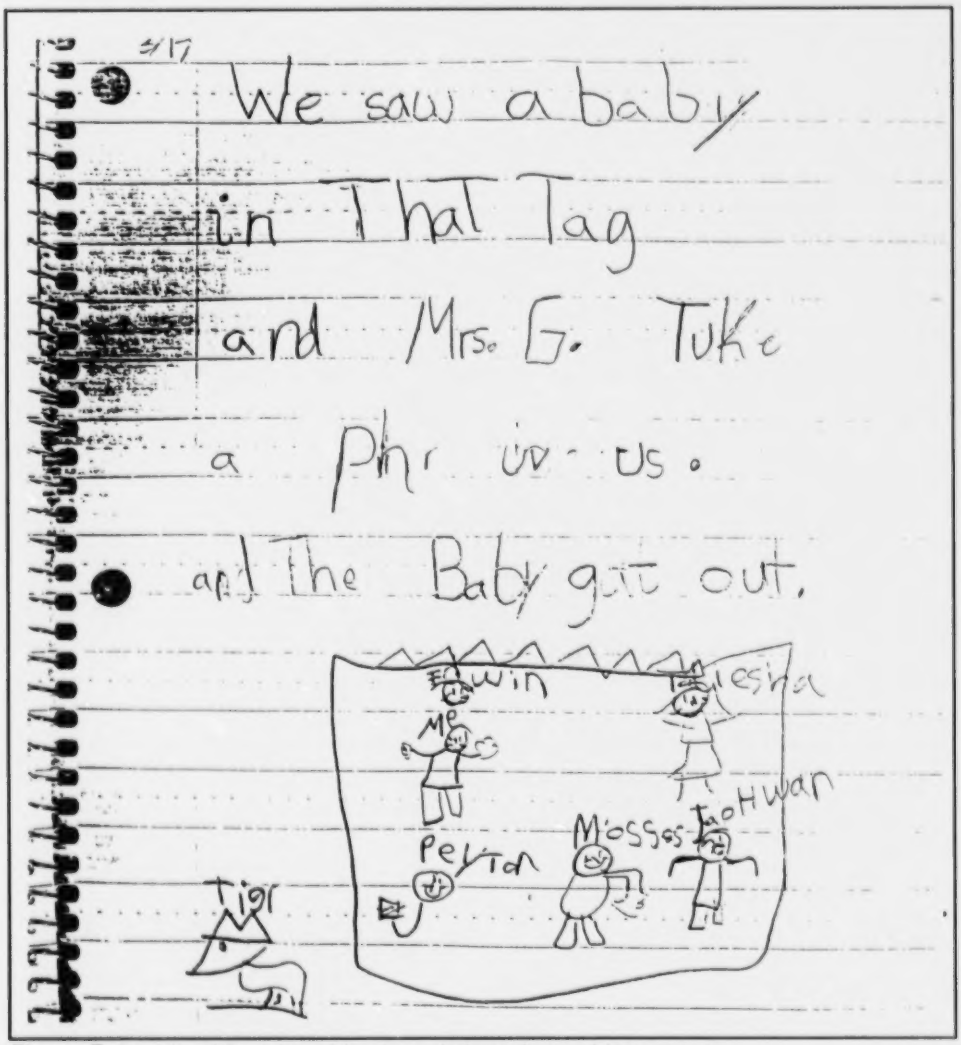


Figure 7. Sample of Tania's writing in an independent writing context.

I'm in the group, everyone helps me and it is easy to get the right word." Reading levels improved consistently for the 3 students, although Tania's progress was more dramatic. In Tania's early reading observations, although she was bordering a pre-alphabetic level of reading (referred to as the novice alphabetic stage by Ehri, 1994), she relied on logographic principles to some degree, while the boys did not (e.g., she read barn instead of bunny, silly

instead of special, but she did not check for comprehension). Her reading level improved from this level to an orthographic level by the end of the study (e.g., if she misread a word, she checked for comprehension, reread the sentence, and figured out the word. An example was when she read "turned" for "turtle," which did not make sense, so she reread the sentence, and decoded "turtle" before she proceeded).

How Is This Developing Word Knowledge Influencing These Students' Word Production?

The data collected during this study suggests that Maria's word studies had an impact on the students' progress as writers. The exposure students received from hunting and sorting words, and distilling patterns, and the redundancy provided during reading activities helped students improve their word production efforts. The word studies allowed students to learn how to take words apart, separating root words from blends, suffixes and prefixes (e.g., rip, trip, jump, jumping, jumped) and onsets from rhymes (e.g., bl-ack). When students were able to see how words work, they were able to produce written text in more efficient ways. For example, Peter wrote, "My pikcher is a mouse. my mouse is running. he is running for cheese." He was able to get the correct sound representations in the word picture by breaking the word into parts as he wrote. He also remembered how to spell running from a previous word study on "ing" and "ed" endings to root words (see Figure 8).

What Effect Does The Social Context Have On Beginning Readers' Strategies and Motivation To Gain Word Knowledge?

Several patterns emerged that illustrated how strategy use for word recognition and word production was influenced by both motivation and social context. First, when the social milieu shifted from a paired to a guided group context, meaning a "more social" context, not only were more strategies utilized, they were more frequent as well. All 3 students utilized 5–8 different strategies in the paired context but they all utilized 13–15 different strategies in the guided group context. In addition, the proportion of orthographic principles (e.g., chunks word to decode, self-corrects, replaces unknown word with graphically similar word) increased for the guided group reading context. In short, the students were using *more* strategies as well as *higher order* strategies within a guided group context.

Second, the case-study students' strategies learned in the guided reading contexts were transferred to independent writing. There was also an increased proportion of higher order strategies utilized, like the ones in guided reading. An example of this was when Ben was doing an independent writing activity with the pet snake in the cage. He got stuck on the word "bowl." He wrote down the first letter "b" and then remembered he saw the word bowl on the morning message board earlier that day. He got out of his seat, went across the room to the message board, and read the board until he found the word *bowl*. He said the letters b-o-w-l, b-o-w-l, and then ran back to his desk

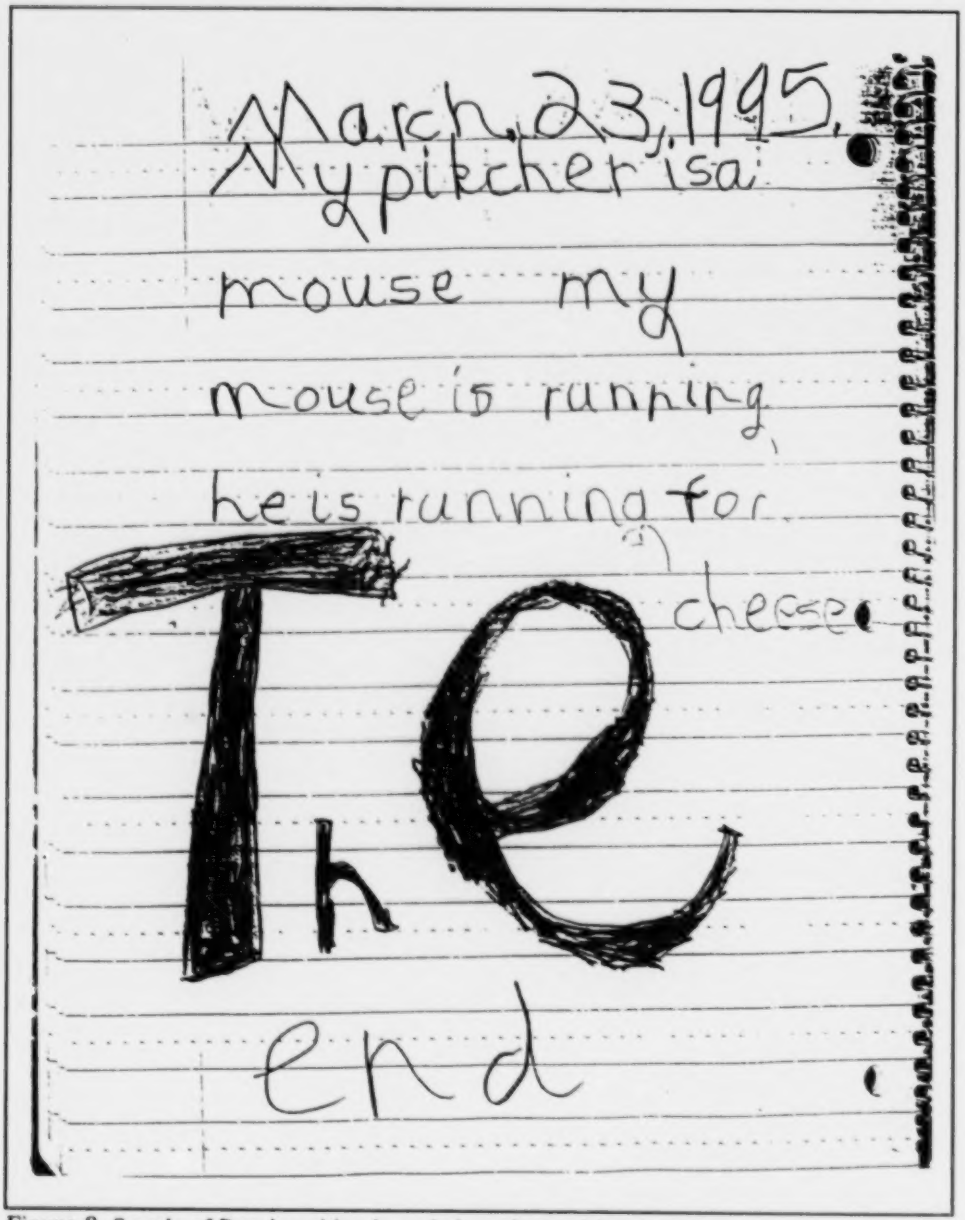


Figure 8. Sample of Peter's writing in an independent writing context.

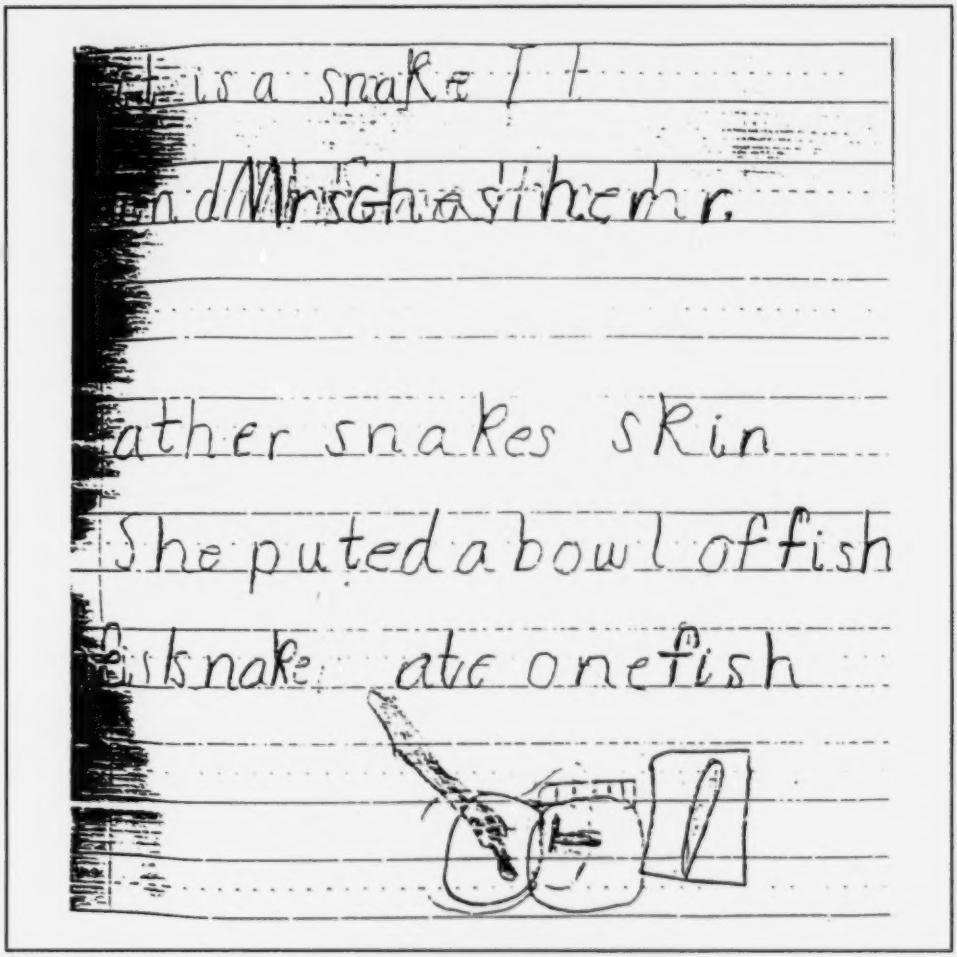


Figure 9. Sample of Ben's writing in an independent writing context.

and wrote down the word on his paper. He also sounded out the word "fish" and worked with it on his paper until it "looked" acceptable to him. He said, "F-i-s-h, fish, yeah, that looks right" (see Figure 9).

Third, when the social context shifted from pairs to group, the students also had different patterns in motivational factors, as reported in student interviews. Not only were there *different* motivations among the students, the *amount* of motivations also varied. In the pairs context, Ben reported various motivational factors (e.g., involvement motivation, social motivation, humor motivation, and task completion

motivation). These motivations remained the same in the group context except the social motivation in the pairs changed to a competence motivation in the group context. Peter's motivational factors in the pairs included similar motivations to those of Ben's (e.g., involvement motivation, social motivation, and humor motivation). In the group context, these motivations remained constant and an additional motivation (e.g., recognition motivation) was expressed. For Peter and Ben, under conditions of increased involvement (e.g., moving from pairs to group contexts), both had increased strategy use and an increased proportion of orthographic strategies. This was true for both word recognition and word production.

Tania's profile was different than Ben's and Peter's. Tania's motivations were fewer than the boys' for the pairs context (e.g., these included only involvement motivation and social motivation), although these motivations were also reported by the boys. The amount of motivations for pairs, however, increased for Tania in the group context (e.g., involvement motivation, social motivation, task completion motivation, and competence motivation). Involvement motivations increased in strength when all 3 students moved from a pair to a group context. The enhancement of engagement from pairs to group context was due to strategy use, motivation, and social context. This pattern was true for all 3 case-study students.

Fourth, when the students moved from guided reading to independent writing (e.g., writing was a new task), Peter and Ben had an increase in competence motivation, involvement motivation, and strategy use. Peter and Ben also used a large variety of motivations and strategies for reading and writing. They both showed self-expression motivation by illustrating their writing, but their social motivation remained at a low level. For Ben, whose motivations included involvement motivation, social motivation, competence motivation, and humor motivation in the group context, the number of his motivations increased in the independent context, adding utility motivation and compliance motivation. Involvement motivation and competence motivation increased in strength from the group to the independent context. Peter's motivations in the group context increased in the independent context with the addition of two different motivations: self-expression and task completion. When Peter moved from the group to the individual context, his involvement motivation increased.

In addition, moving from guided to independent contexts, Tania showed a decrease in involvement motivation; but social motivation, competence motivation, and task completion motivation were all maintained. Tania's high involvement in the group reading context declined when moved to an independent context. There was also a variety of motivations working in the independent context, but all were at a low level of strength. When Tania moved from a group to an independent context, her motivations remained constant in a group context to an independent context; but in the independent context, Tania was more distractable (e.g., meaning a negative motivation was reported with a low strength). There was an underlying theme that involvement was the

influence of increased strategies not the social context. The social context was a means, however, to induce this involvement reported by the 3 case-study students.

Limitations To This Study

The purpose of this study was to learn *how* these 3 case-study students increased their abilities to read and write in the different social contexts and instructional settings in their classroom. The fact that there was progress was not surprising, but it was not the primary focus of this investigation. We examined the instructional methods of the teacher to better understand her methods and the conditions in which she exposed and taught word knowledge to her students. The intent of the authors was neither to predict growth learning over time nor to compare the case-study students to their peers, although this provides background information for the 3 case-study students. We did not test statistically for growth (pre-post) and do not have evidence to claim that the 3 case-study students are not typical. We chose to describe the contexts and instructional methods in which these 3 students learned.

It is not clear why the 3 case-study students appeared to exceed the class average in reading and everyone in the class in spelling development. Perhaps it was the fact that these 3 students were grouped together, according to their developmental levels, and Maria adjusted her instruction to meet their developmental needs. Another reason could be that they were the focus of our investigation, which may have caused Maria to attend more to these three students, monitoring and responding to their developmental needs more consciously. We did not collect data on the amount of time that Maria spent with the other students in the class, so we cannot make the claim that she spent more time with the 3 case-study students. Another reason may be that these 3 students were more receptive to Maria's instruction because they were not receiving supplemental services and were motivated by other independent students in the class to become better readers and writers. We do believe, however, that the unique instructional methods Maria employed, the exposure to text and environmental print the students received within a holistic context, the group dynamic in the classroom, and the variety of social contexts in which students participated, in concert, contributed to the 3 case-study students' success and motivation in their reading and writing attempts.

Conclusion

Language is the foundation on which literacy is built. The ability to read words stems from a child's language acquisition. Letters, words, and sentences are three connections between text and the beginning reader's knowledge of language. If becoming literate is a social process, the roots of motivation for literate activity are deeply embedded in the sociocultural contexts of literacy learning and the interactive transfer processes occurring in those particular contexts (Oldfather, 1994). Social interaction is motivating in many ways. Peer comments and suggestions can spark students' interests. Students' confidence and self-efficacy may increase by interacting with

their peers (Schunk, 1989). Situations that encourage productive social interaction yield choices for students to become more confident and competent readers and writers (Turner & Paris, 1995). Students' involvement in learning includes both cognition and motivation, operating together, not separate from one another (Pintrich & Schrauben, 1992).

This study bolsters the view that word studies can be embedded within a holistic literacy setting in ways that result in gains in spelling and decoding competence (e.g., Gill, 1992). Furthermore, it provides a description of how students appropriated word-study instruction and employed it in independent reading and writing activities. "If students are to be motivated readers and writers, we must give them the tools and the reasons to read and write and allow them to discover the many paths to literacy" (Turner & Paris, 1995, p. 670).

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